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JUN 24 2004
PATENT & TRADEMARK OFFICE

FIG. 1

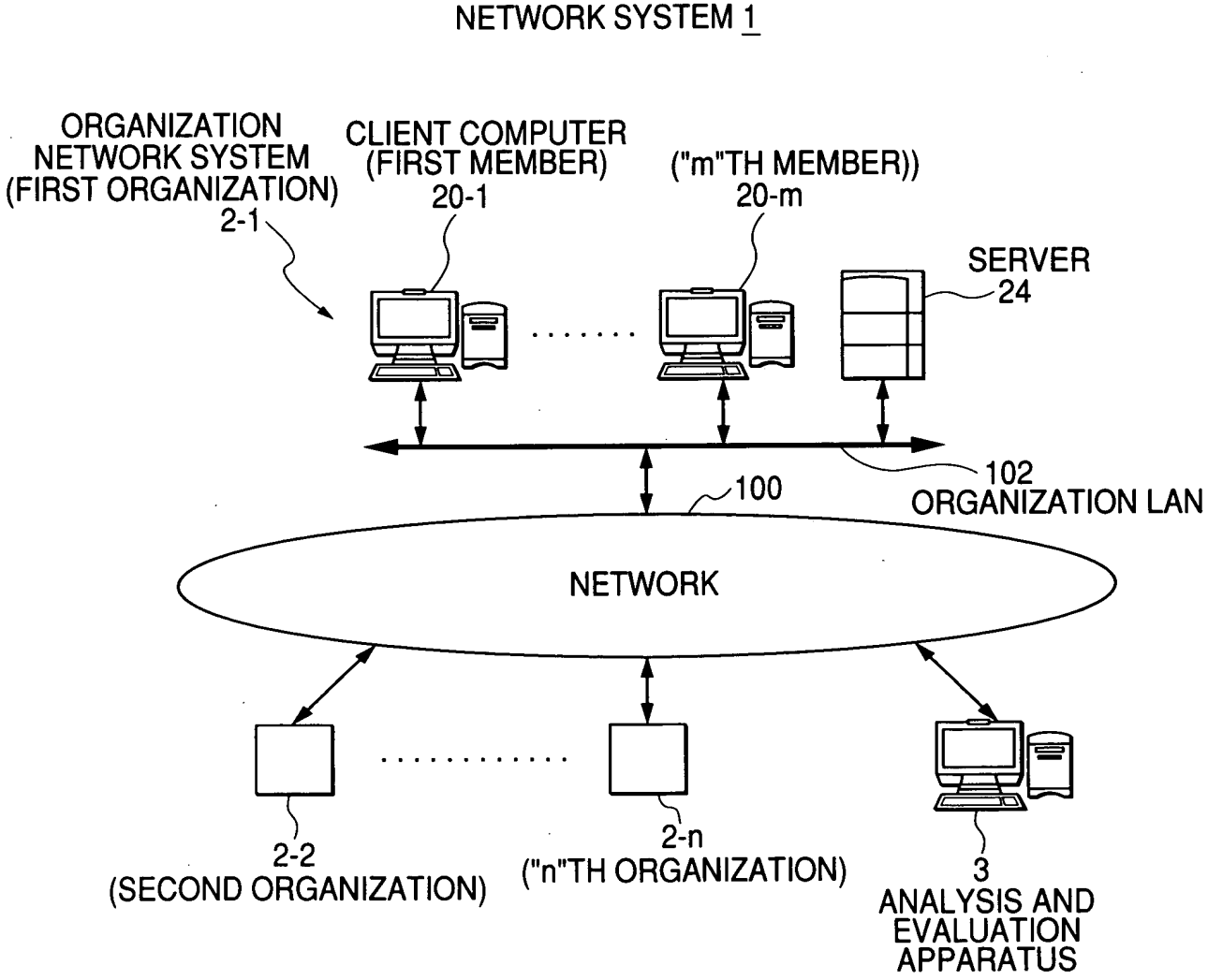


FIG. 2

CLIENT COMPUTER 20,
SERVER 24,
ANALYSIS AND EVALUATION APPARATUS 3

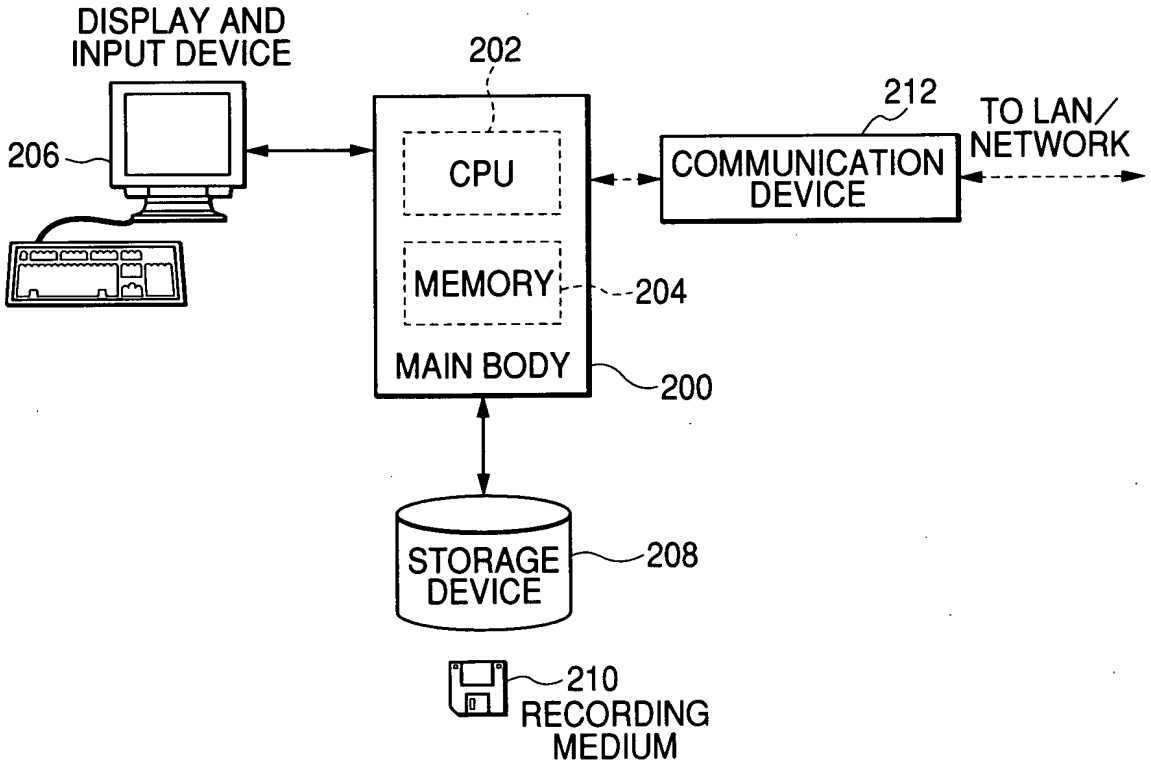


FIG. 3

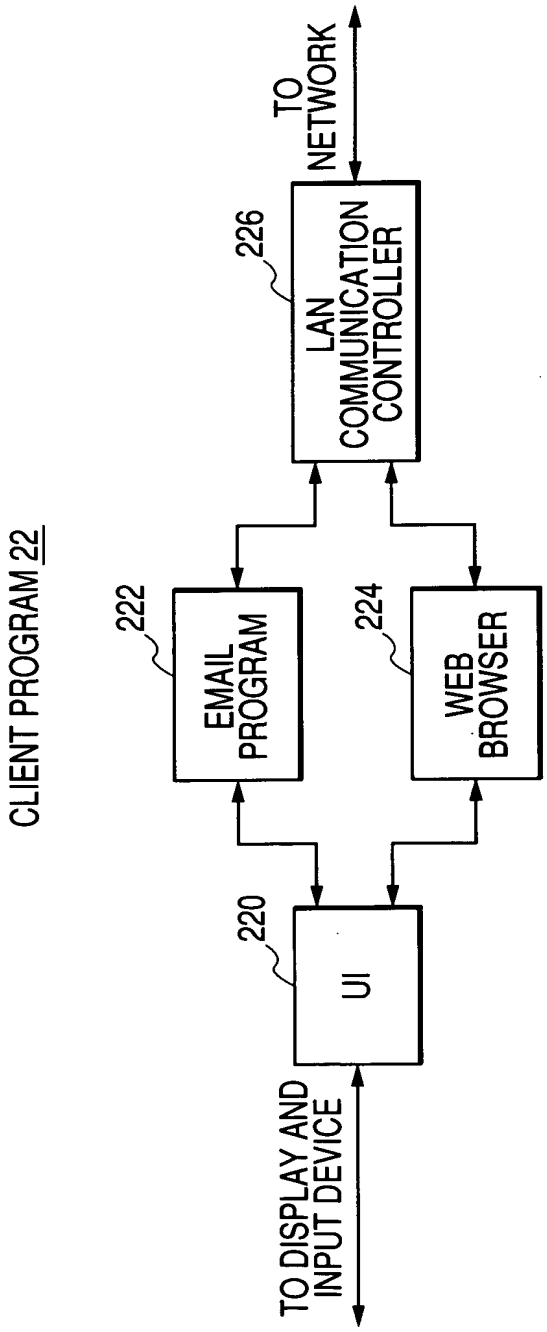

CLIENT PROGRAM 22
TO NETWORK
226
LAN COMMUNICATION CONTROLLER
222
EMAIL PROGRAM
224
WEB BROWSER
220
UI
TO DISPLAY AND INPUT DEVICE

FIG. 4

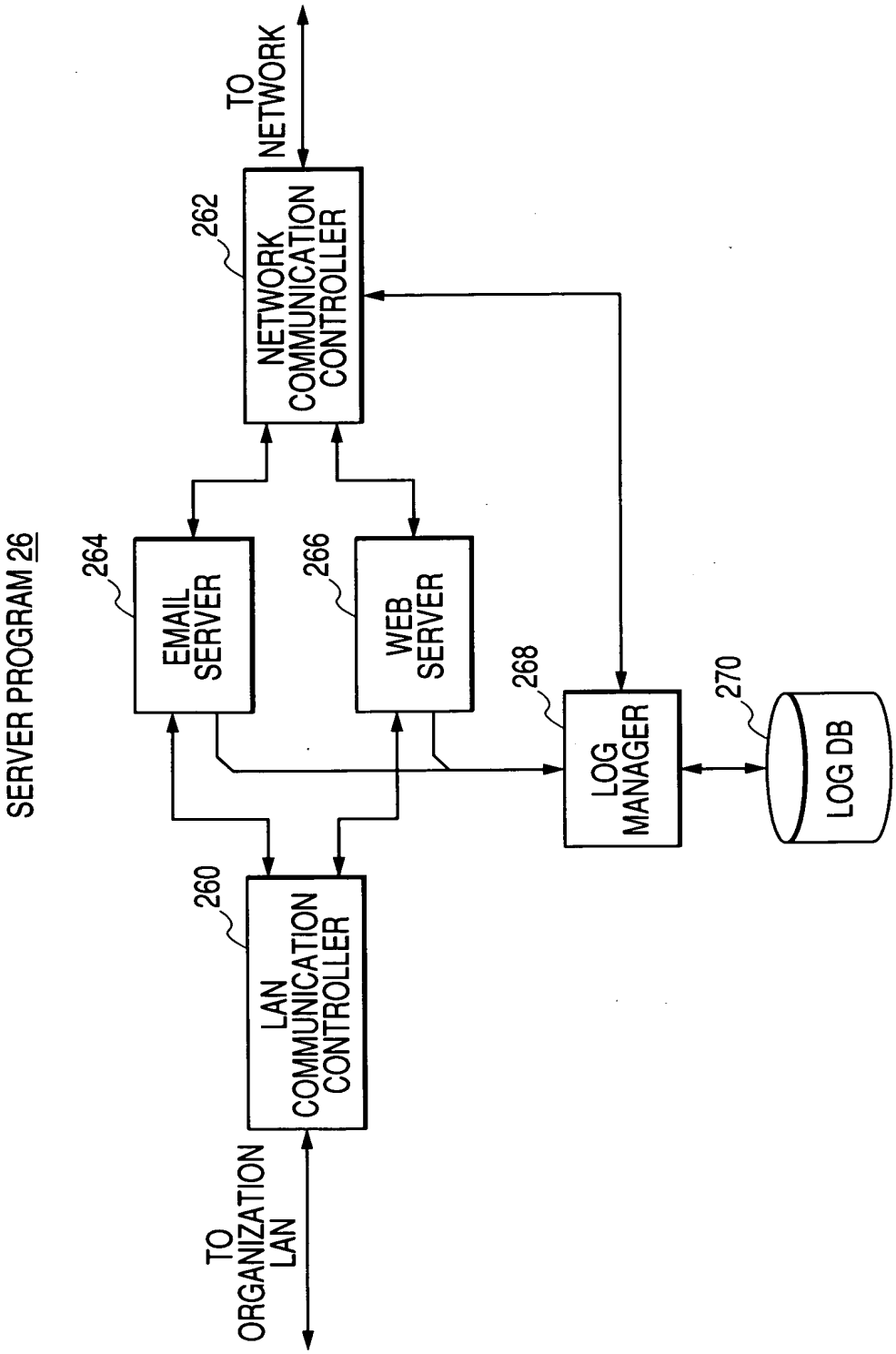

SERVER PROGRAM 26
TO NETWORK
262
NETWORK COMMUNICATION CONTROLLER
264
EMAIL SERVER
266
WEB SERVER
268
LOG MANAGER
270
LOG DB
260
LAN COMMUNICATION CONTROLLER
TO ORGANIZATION LAN

FIG. 5

COMMUNICATION ID	SENDER ID	RECIPIENT ID	COMMUNICATION CONTENTS	COMMUNICATION DATE AND TIME

FIG. 6

COMMUNICATION ID	SENDER ID	RECIPIENT ID	COMMUNICATION CONTENTS	DATE AND TIME
1	1	2	SHOULD REVIEW THE RESULTS OF A DISCUSSION CONCERNING WHETHER PRODUCTS A, B AND E CAN BE PREPARED IN TIME FOR THE DELIVERY DEADLINE.	10:00, AUGUST 5, 2001
2	1	3	PLEASE SET UP A MEETING FOR PRODUCT A FOR 19:00 TODAY.	11:00, AUGUST 5, 2001
3	1	4	BETTER HAVE MORE INTENSIVE DISCUSSION OF PRODUCT E LATER.	8:00, AUGUST 6, 2001
4	2	3	WHEN IS THE DEADLINE FOR THE DELIVERY OF PRODUCT B?	14:00, AUGUST 5, 2001
5	3	1	THE DEADLINE OF THE DELIVERY OF PRODUCT A DEPENDS ON THE PRODUCTIVITY WHEN TECHNIQUE 1 IS USED. HERE IS REFERENCE MATERIAL RELATED TO TECHNIQUE 1.	15:00, AUGUST 5, 2001
6	3	2	THE DEADLINE FOR THE DELIVERY OF PRODUCT B IS NOVEMBER.	9:00, AUGUST 6, 2001
7	4	1	THE PACKAGE DESIGNS FOR PRODUCTS A AND B ARE GREATLY DELAYED, · · ·	14:00, AUGUST 5, 2001
8	4	3	THE PACKAGE DESIGN FOR PRODUCT A WILL BE DELAYED. SO TODAY, PLEASE SUBMIT A REPORT ON TECHNIQUE 1 TO OUR PRESIDENT.	16:00, AUGUST 5, 2001
· · ·	· · ·	· · ·	· · ·	· · ·
· · ·	· · ·	· · ·	· · ·	· · ·

FIG. 7

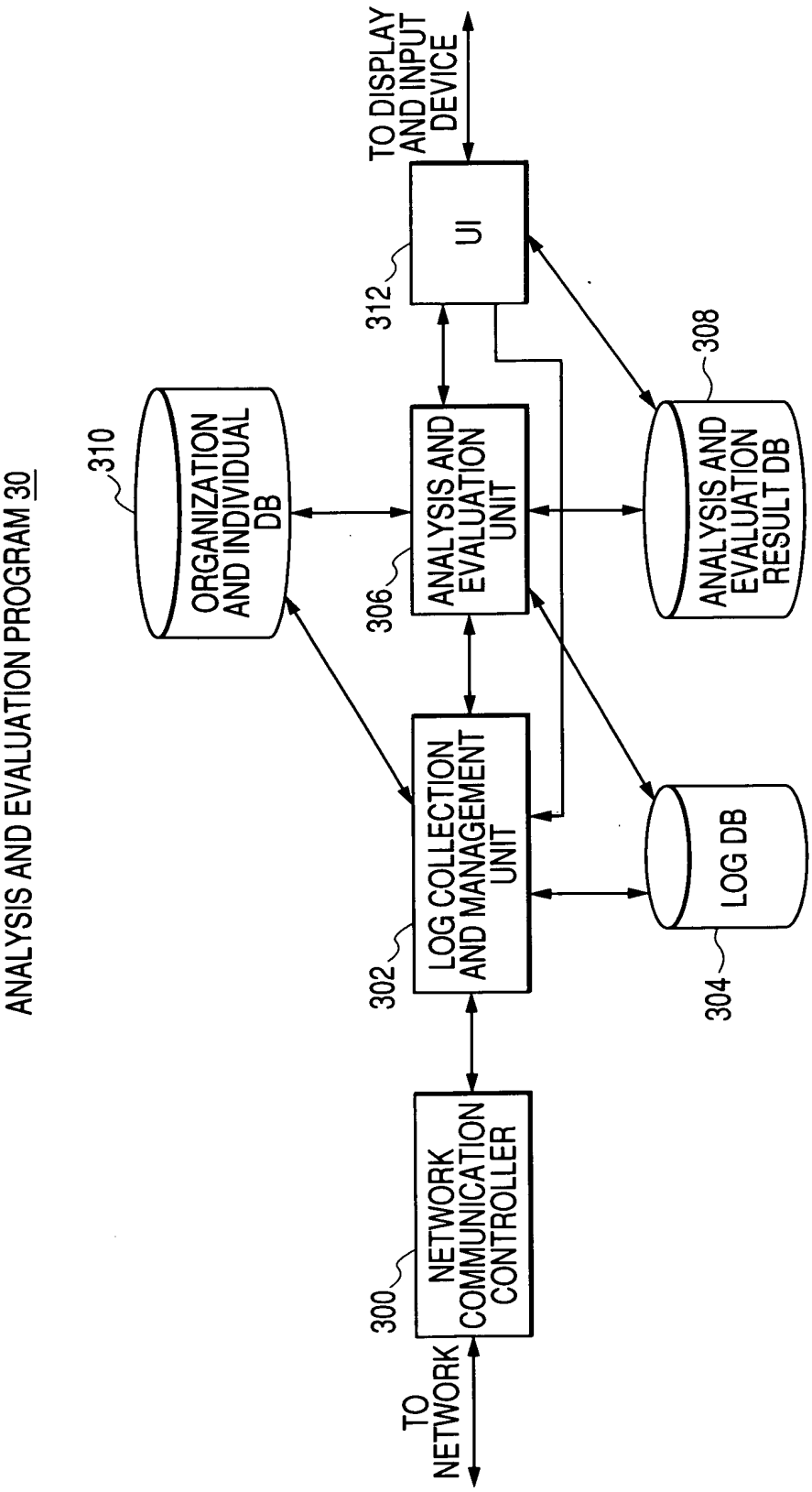

ANALYSIS AND EVALUATION PROGRAM 30
TO NETWORK
NETWORK COMMUNICATION CONTROLLER
300
LOG COLLECTION AND MANAGEMENT UNIT
302
LOG DB
304
ANALYSIS AND EVALUATION UNIT
306
ANALYSIS AND EVALUATION RESULT DB
308
UI
312
TO DISPLAY AND INPUT DEVICE
ORGANIZATION AND INDIVIDUAL DB
310

FIG. 8

ORGANIZATION ID	ORGANIZATION NAME	ORGANIZATION FORM	PERIOD	UPPER ORGANIZATION

FIG. 9

ORGANIZATION ID	ORGANIZATION NAME	ORGANIZATION FORM	PERIOD	UPPER ORGANIZATION
1	PRESIDENT'S OFFICE	FORMAL	JULY 4, 1992 TO THE PRESENT	-
2	B	FORMAL	JULY 4, 1992 TO THE PRESENT	1
3	C	INFORMAL	OCTOBER 24, 2001 TO THE PRESENT	2
4	D	PROJECT	MAY 17, 2003 TO JUNE 2, 2003	3
. . .	. . .	. . .	. . .	. . .
100	AA	FORMAL	DECEMBER 23, 2002 TO MARCH 31, 2003	29
101	AB	INFORMAL	JANUARY 7, 2003 TO MARCH 31, 2003	100
. . .	. . .	. . .	. . .	. . .

FIG. 10

PERSONAL ID (EMPLOYEE ID)	NAME	EMAIL ADDRESS	ORGANIZATION ID

FIG. 11

EMPLOYEE ID	NAME	EMAIL ADDRESS	ORGANIZATION ID
1	Hoge1	Hoge1@a.b.c	1
2	Hoge2	Hoge2@a.b.c	2, 3
3	Hoge3	Hoge3@a.b.c	5, 8, 10
4	Hoge4	Hoge4@a.b.c	5, 8, 10
. . .	. . .	. . .	. . .
127	Hoge127	Hoge127@a.b.c	3, 50, 75, 99, 120
. . .	. . .	. . .	. . .

FIG. 12

ORGANIZATION COMMUNICATION ID
SENDER ID
RECIPIENT ID
SENDER ORGANIZATION ID
RECIPIENT ORGANIZATION ID
COMMUNICATION CONTENTS
COMMUNICATION DATE AND TIME

FIG. 13

COMMU-NICATION ID	SENDER ID	RECIPIENT ID	SENDER ORGANI-ZATION ID	RECIPIENT ORGANI-ZATION ID	COMMUNICATION CONTENTS	DATE AND TIME
1	1	2	1	5, 8, 10	SHOULD REVIEW THE RESULTS OF A DISCUSSION CONCERNING WHETHER PRODUCTS A, B AND E CAN BE PREPARED IN TIME FOR THE DELIVERY DEADLINE.	10:00, AUGUST 5, 2001
2	1	3	1	5, 8, 10	PLEASE SET UP A MEETING FOR PRODUCT A FOR 19:00 TODAY.	11:00, AUGUST 5, 2001
3	1	4	1	5, 8, 10	BETTER HAVE MORE INTENSIVE DISCUSSION OF PRODUCT E LATER.	8:00, AUGUST 6, 2001
4	2	3	2, 3	5, 8, 10	WHEN IS THE DEADLINE FOR THE DELIVERY OF PRODUCT B?	14:00, AUGUST 5, 2001
5	3	1	5, 8, 10	1	THE DEADLINE OF THE DELIVERY OF PRODUCT A DEPENDS ON THE PRODUCTIVITY WHEN TECHNIQUE 1 IS USED. HERE IS REFERENCE MATERIAL RELATED TO TECHNIQUE 1.	15:00, AUGUST 5, 2001
6	3	2	5, 8, 10	2, 3	THE DEADLINE FOR THE DELIVERY OF PRODUCT B IS NOVEMBER.	9:00, AUGUST 6, 2001
7	4	1	5, 8, 10	1	THE PACKAGE DESIGNS FOR PRODUCTS A AND B ARE GREATLY DELAYED, ···	14:00, AUGUST 5, 2001
8	4	3	5, 8, 10	5, 8, 10	THE PACKAGE DESIGN FOR PRODUCT A WILL BE DELAYED. SO TODAY, PLEASE SUBMIT A REPORT ON TECHNIQUE 1 TO OUR PRESIDENT.	16:00, AUGUST 5, 2001
. . .	. . .	. . .	. . .	. . .	. . .	. . .
. . .	. . .	. . .	. . .	. . .	. . .	. . .

FIG. 14

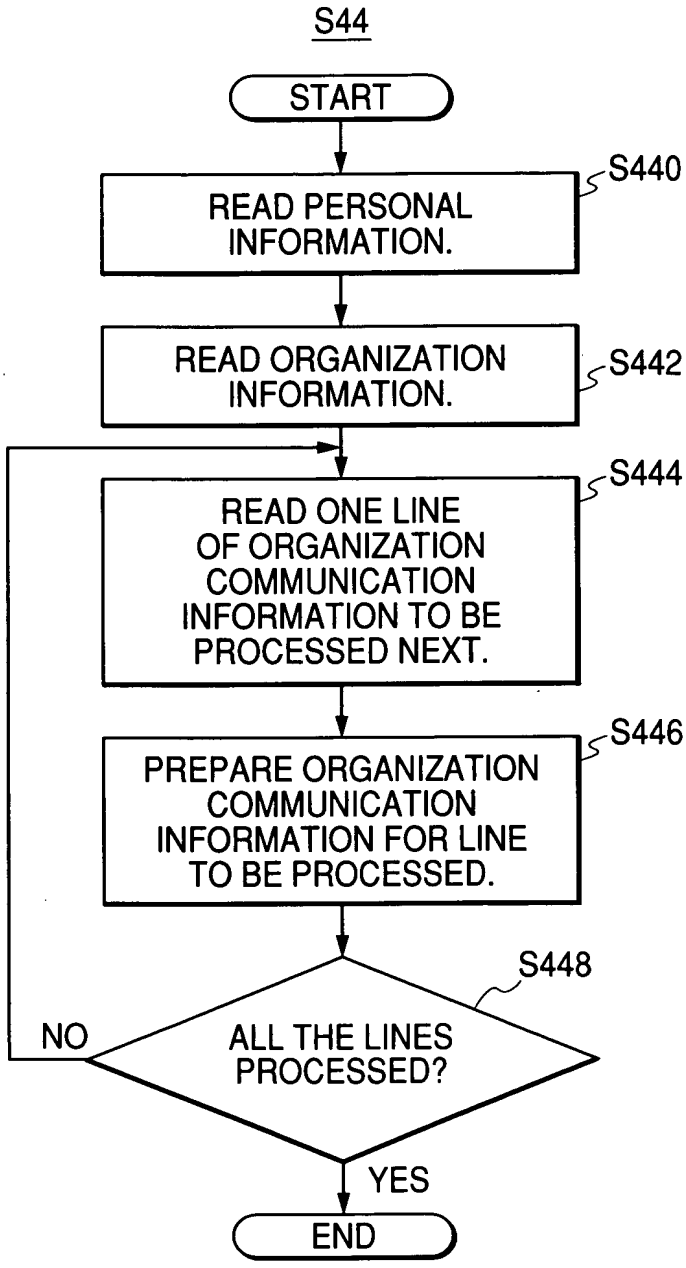

S44
START
READ PERSONAL INFORMATION.
S440
READ ORGANIZATION INFORMATION.
S442
READ ONE LINE OF ORGANIZATION COMMUNICATION INFORMATION TO BE PROCESSED NEXT.
S444
PREPARE ORGANIZATION COMMUNICATION INFORMATION FOR LINE TO BE PROCESSED.
S446
ALL THE LINES PROCESSED?
S448
NO
YES
END

FIG. 15

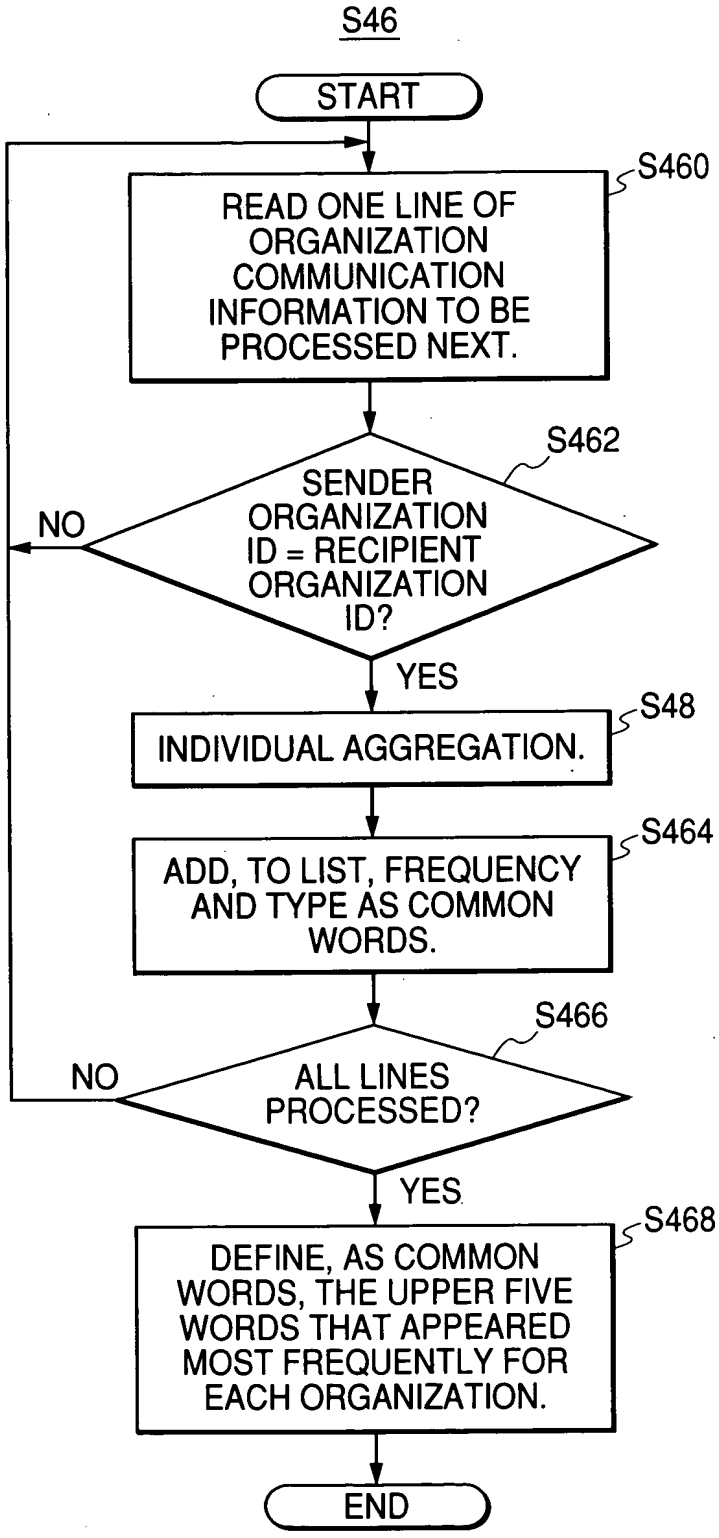

S46
START
S460
READ ONE LINE OF ORGANIZATION COMMUNICATION INFORMATION TO BE PROCESSED NEXT.
S462
SENDER ORGANIZATION ID = RECIPIENT ORGANIZATION ID?
NO
YES
S48
INDIVIDUAL AGGREGATION.
S464
ADD, TO LIST, FREQUENCY AND TYPE AS COMMON WORDS.
S466
ALL LINES PROCESSED?
NO
YES
S468
DEFINE, AS COMMON WORDS, THE UPPER FIVE WORDS THAT APPEARED MOST FREQUENTLY FOR EACH ORGANIZATION.
END

FIG. 16

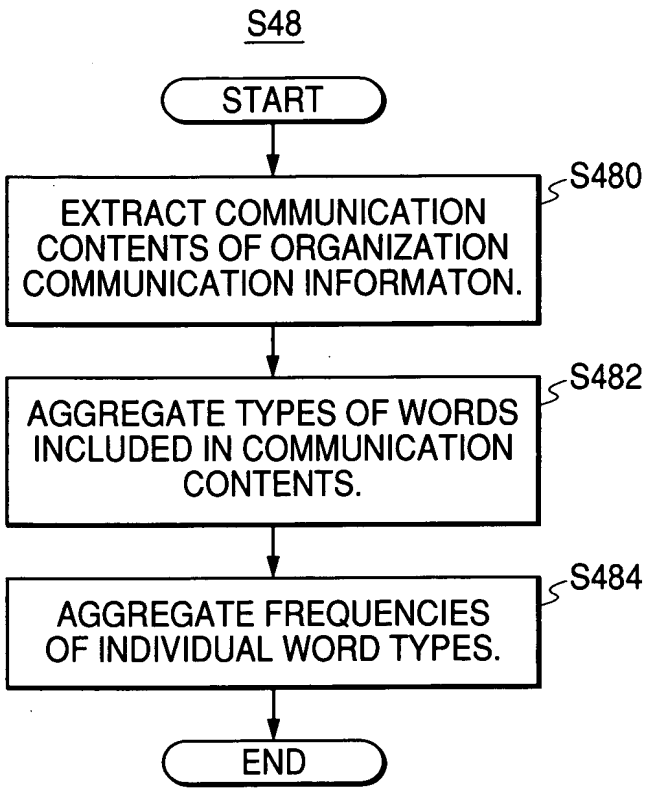


FIG. 17

ORGANIZATION ID	COMMON WORD

FIG. 18A

COMMON WORD FOR ORGANIZATION A

COMMON WORD	APPEARANCE FREQUENCY
CLIENT	48
WOMAN	42
DISCUSSION	40
STRATEGY	39
TECHNIQUE	30
CUSTOMER	29
BUSINESS	25
SITE	5

FIG. 18B

COMMON WORD FOR ORGANIZATION B

COMMON WORD	APPEARANCE FREQUENCY
SITE	52
REQUEST	48
SERVER	40
EVERYBODY	40
IDEA	40
DISCUSSION	32
TECHNIQUE	30
COST	3

FIG. 18C

COMMON WORD FOR ORGANIZATION C

COMMON WORD	APPEARANCE FREQUENCY
YEN	108
ROBOT	94
TECHNIQUE	93
DISCUSSION	78
PRINT	68
COST	64
PRODUCTION	54
SERVER	10

FIG. 19

ORGANIZATION ID	COMMON WORD	CONCEPT

FIG. 20

ORGANIZATION ID	COMMON SYNONYM	
1	COMMON SYNONYM	APPEARANCE FREQUENCY
	{CLIENTELE, CUSTOMER, CLIENT}	100
	{ACTIVITY, ACTION, JOB, TASK, · · ·}	78
	{SOLUTION, RESOLVING METHOD, ANSWER, · · ·}	32
2	COMMON SYNONYM	APPEARANCE FREQUENCY
	{UNDERSTANDING, KNOWLEDGE, SENSE, EXPERIENCE}	32
	{TECHNIQUE, TECHNOLOGY, FUNCTION}	14
	· · ·	7
3	COMMON SYNONYM	APPEARANCE FREQUENCY
	· · ·	98
	· · ·	20
	· · ·	3

FIG. 21

SENDER ORGANIZATION ID	RECIPIENT ORGANIZATION ID	COMMON WORD

FIG. 22

SENDER ORGANIZATION ID	RECIPIENT ORGANIZATION ID	COMMON WORD
1	2	{CLIENT, SATISFACTION, RELIABILITY}
1	5	{CLIENT, COMPETITION, COOPERATION}
2	1	{SERVICE, SOLUTION, ···}
2	4	{···, ···, ···, ···}
3	1	{···, ···, ···, ···}
3	5	{···, ···, ···, ···}

FIG. 23

SENDER ORGANIZATION ID	RECIPIENT ORGANIZATION ID	COMMON WORD	CONCEPT

FIG. 24

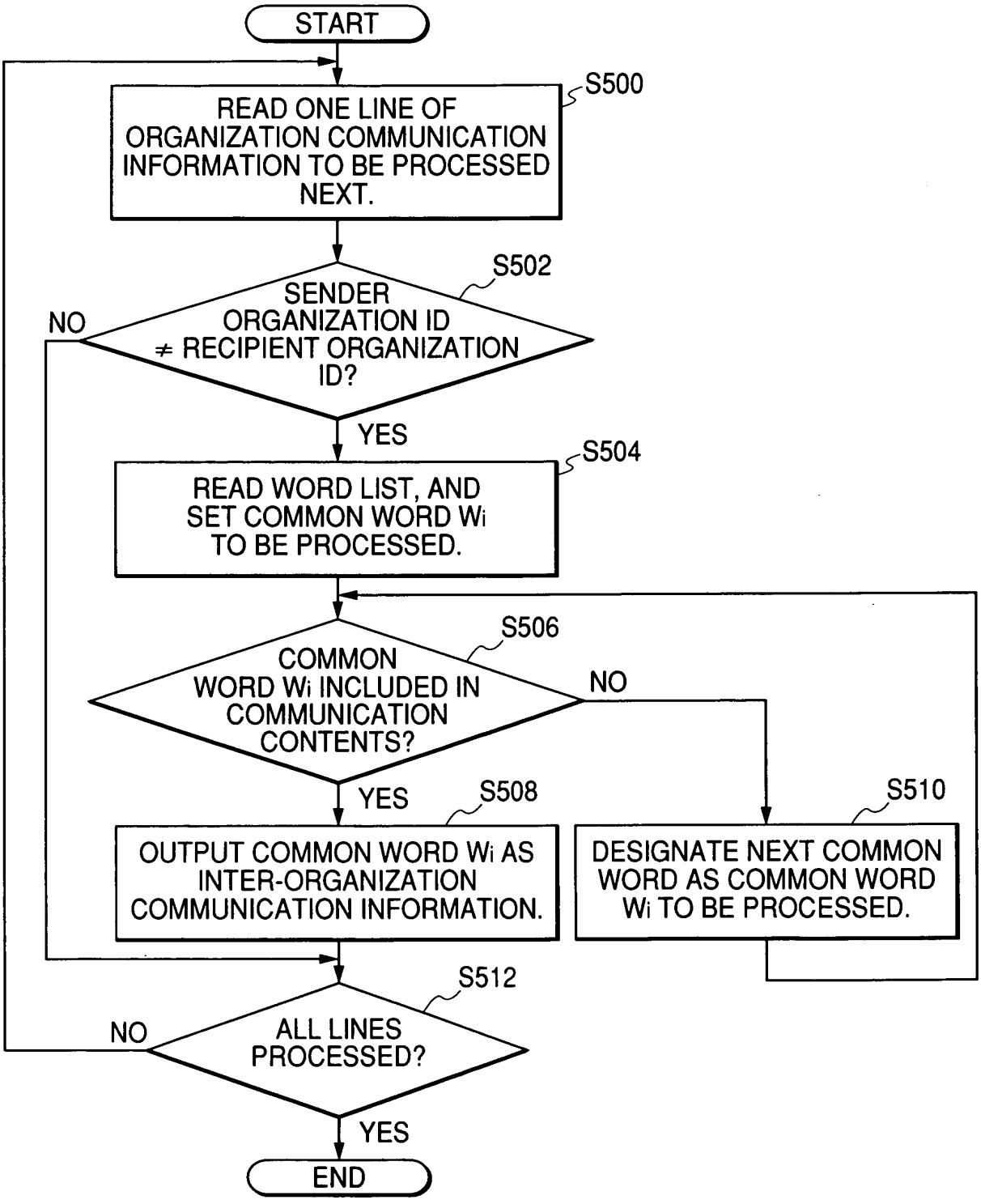

S50
START
S500
READ ONE LINE OF ORGANIZATION COMMUNICATION INFORMATION TO BE PROCESSED NEXT.
S502
SENDER ORGANIZATION ID ≠ RECIPIENT ORGANIZATION ID?
NO
YES
S504
READ WORD LIST, AND SET COMMON WORD Wi TO BE PROCESSED.
S506
COMMON WORD Wi INCLUDED IN COMMUNICATION CONTENTS?
NO
YES
S508
OUTPUT COMMON WORD Wi AS INTER-ORGANIZATION COMMUNICATION INFORMATION.
S510
DESIGNATE NEXT COMMON WORD AS COMMON WORD Wi TO BE PROCESSED.
S512
ALL LINES PROCESSED?
NO
YES
END

FIG. 25

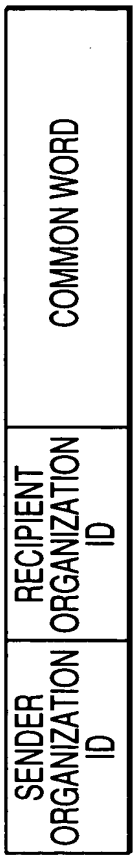


FIG. 26

FIG. 27

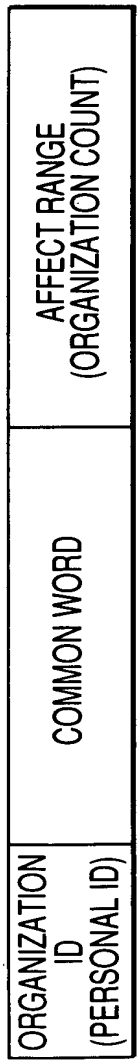


FIG. 28

ORGANIZATION ID	AFFECT RANGE (ORGANIZATION COUNT)
1	115
2	32
3	50
4	40

FIG. 29

ORGANIZATION ID	AFFECT LEVEL (FREQUENCY)
1	753
2	222
3	300
4	50

FIG. 30

ORGANIZATION ID (PERSONAL ID)	COMMON WORD	CONCEPT	AFFECT RANGE (ORGANIZATION COUNT)

FIG. 31

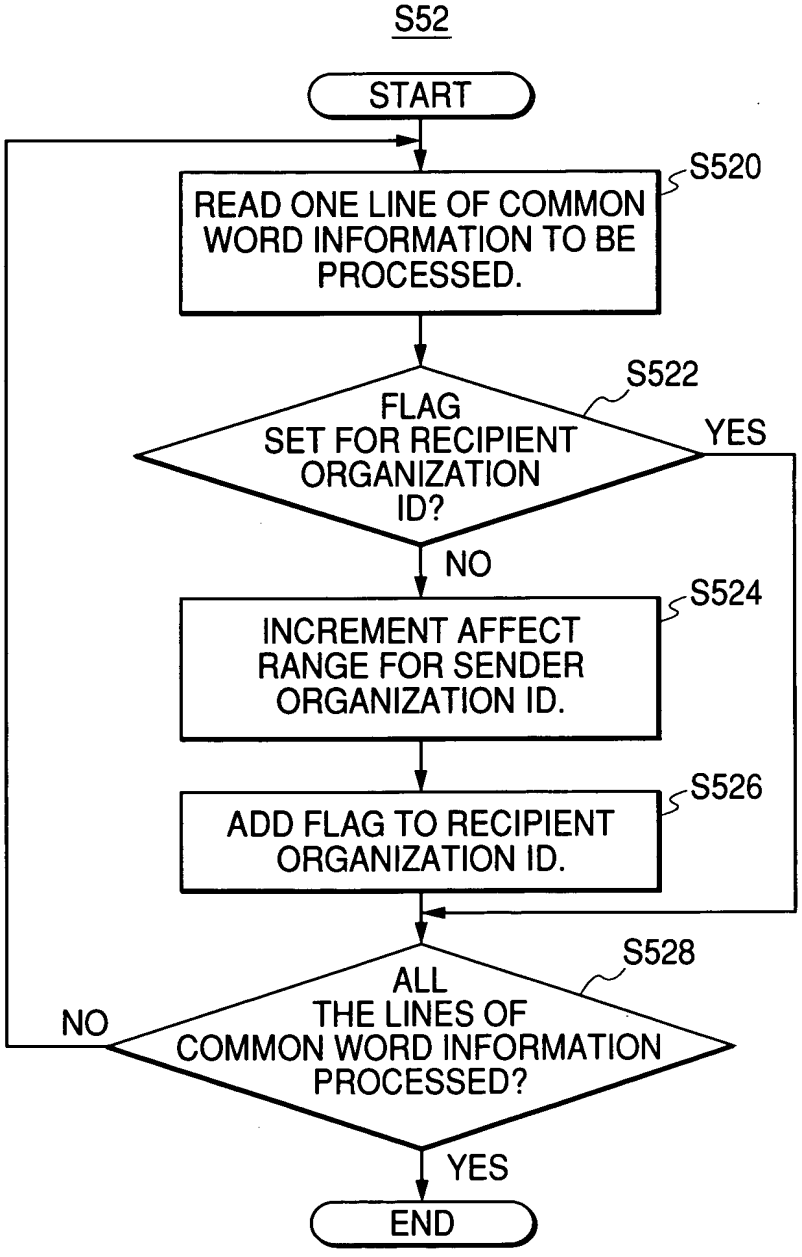

S52
START
S520
READ ONE LINE OF COMMON WORD INFORMATION TO BE PROCESSED.
S522
FLAG SET FOR RECIPIENT ORGANIZATION ID?
YES
NO
S524
INCREMENT AFFECT RANGE FOR SENDER ORGANIZATION ID.
S526
ADD FLAG TO RECIPIENT ORGANIZATION ID.
S528
ALL THE LINES OF COMMON WORD INFORMATION PROCESSED?
NO
YES
END

FIG. 32

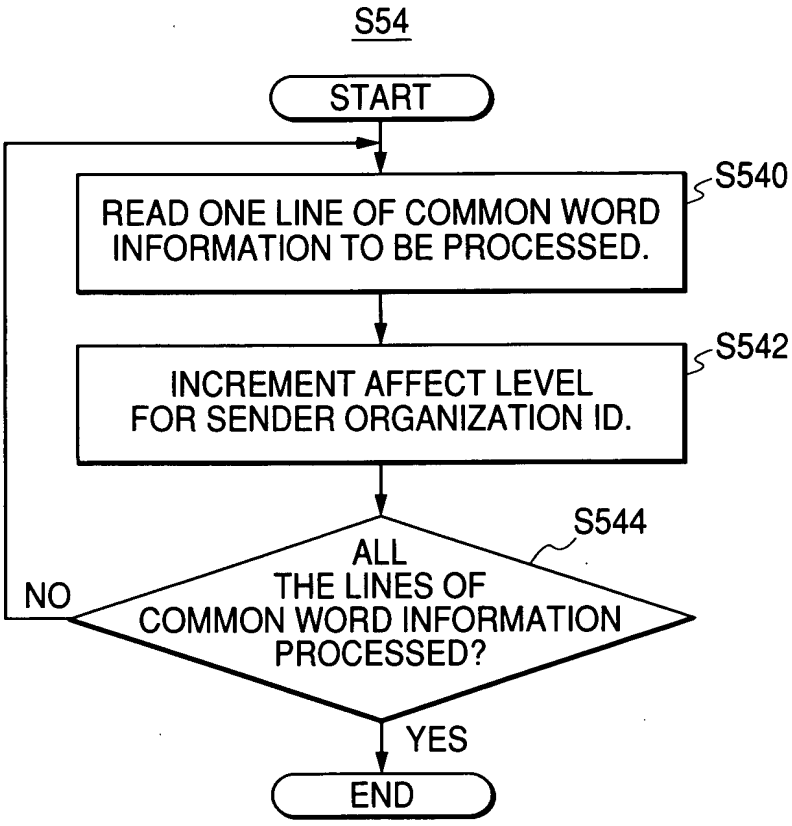

S54
START
READ ONE LINE OF COMMON WORD INFORMATION TO BE PROCESSED.
S540
INCREMENT AFFECT LEVEL FOR SENDER ORGANIZATION ID.
S542
ALL THE LINES OF COMMON WORD INFORMATION PROCESSED?
S544
NO
YES
END

FIG. 33

ORGANIZATION ID	CONCEPT (WORD)	AFFECT RANGE (ORGANIZATION COUNT)
1	CLIENT	50
1	SATISFACTION	50
1	RELIABILITY	15
2	SERVICE	12
2	SOLUTION	20
3	KNOWLEDGE	50
4	TECHNIQUE	10
4	COMPETITION	20
4	ENVIRONMENT	10

FIG. 34

ORGANIZATION ID	CONCEPT (WORD)	AFFECT LEVEL (FREQUENCY)
1	CLIENT	500
1	SATISFACTION	200
1	RELIABILITY	53
2	SERVICE	121
2	SOLUTION	101
3	KNOWLEDGE	300
4	TECHNIQUE	10
4	COMPETITION	20
4	ENVIRONMENT	20

FIG. 35

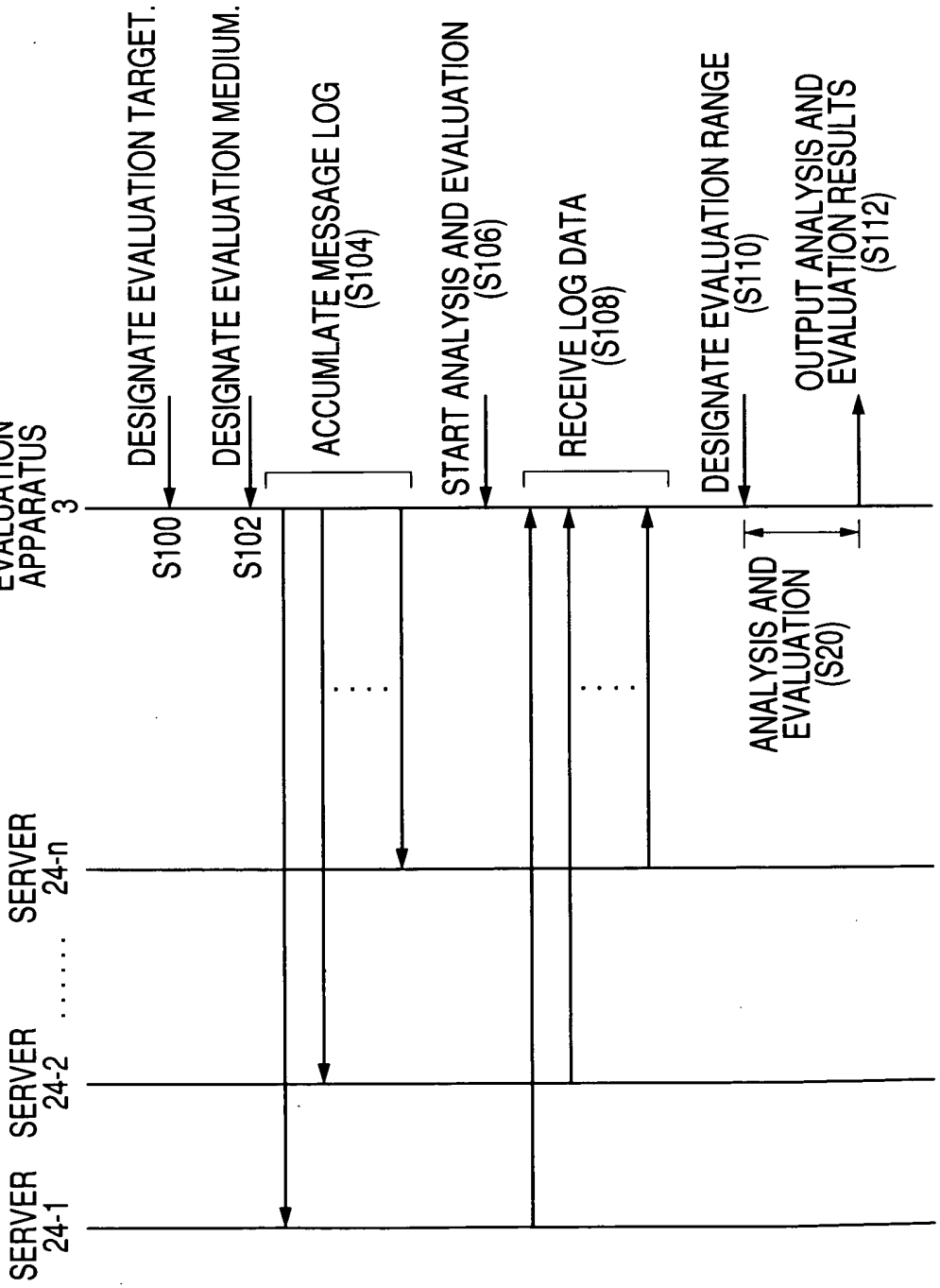
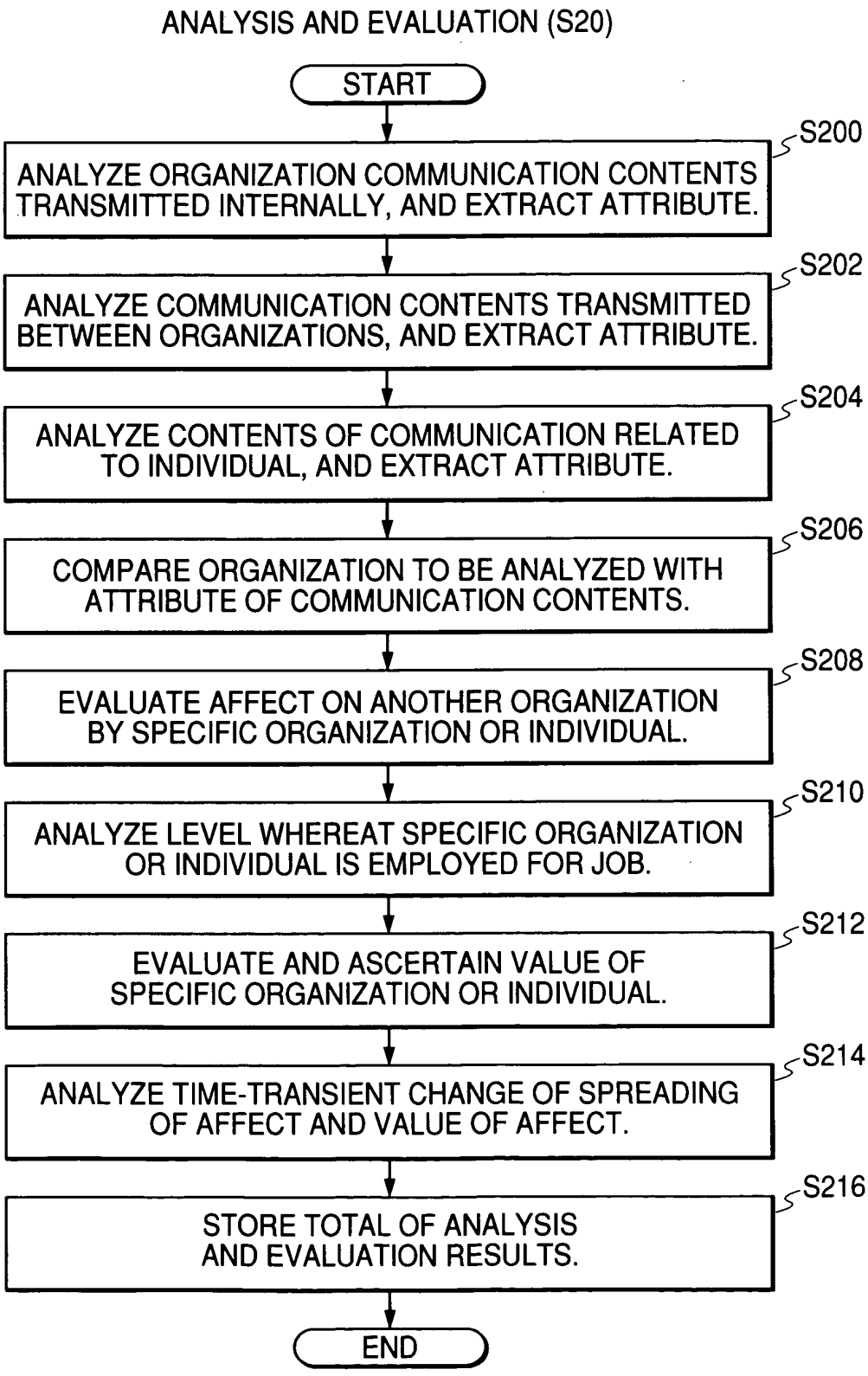

ANALYSIS AND EVALUATION SEQUENCE (S10)
ANALYSIS AND EVALUATION APPARATUS 3
SERVER 24-1
SERVER 24-2
SERVER 24-n
DESIGNATE EVALUATION TARGET.
S100
DESIGNATE EVALUATION MEDIUM.
S102
ACCUMLATE MESSAGE LOG (S104)
START ANALYSIS AND EVALUATION (S106)
RECEIVE LOG DATA (S108)
DESIGNATE EVALUATION RANGE (S110)
OUTPUT ANALYSIS AND EVALUATION RESULTS (S112)
ANALYSIS AND EVALUATION (S20)

FIG. 36


ANALYSIS AND EVALUATION (S20)
START
ANALYZE ORGANIZATION COMMUNICATION CONTENTS TRANSMITTED INTERNALLY, AND EXTRACT ATTRIBUTE.
S200
ANALYZE COMMUNICATION CONTENTS TRANSMITTED BETWEEN ORGANIZATIONS, AND EXTRACT ATTRIBUTE.
S202
ANALYZE CONTENTS OF COMMUNICATION RELATED TO INDIVIDUAL, AND EXTRACT ATTRIBUTE.
S204
COMPARE ORGANIZATION TO BE ANALYZED WITH ATTRIBUTE OF COMMUNICATION CONTENTS.
S206
EVALUATE AFFECT ON ANOTHER ORGANIZATION BY SPECIFIC ORGANIZATION OR INDIVIDUAL.
S208
ANALYZE LEVEL WHEREAT SPECIFIC ORGANIZATION OR INDIVIDUAL IS EMPLOYED FOR JOB.
S210
EVALUATE AND ASCERTAIN VALUE OF SPECIFIC ORGANIZATION OR INDIVIDUAL.
S212
ANALYZE TIME-TRANSIENT CHANGE OF SPREADING OF AFFECT AND VALUE OF AFFECT.
S214
STORE TOTAL OF ANALYSIS AND EVALUATION RESULTS.
S216
END